

## CLAIMS

1. Switching system for making energy available to electric consumers of different requirement of energy, preferably for use in the power supply of a motor vehicle, having a chargeable energy memory of a specific voltage level and consumers situated in the circuit of said energy memory and fed thereby, characterized in that the energy memory is designed as power-limiting primary energy memory (1) for ensuring the operation of a first group of consumers (2), and that the switching system has a secondary energy memory (4) to said consumers (5) so that during energy delivery from said secondary energy memory (4) to said consumers (5) of said second group, a noticeable feedback to said primary energy memory (1) does not occur even while it is being loaded by consumers (2) of said second group.

2. Switching system according to Claim 1, characterized in that said secondary energy memory (4) is charged from said primary energy memory (1) by a voltage converter (3) designed as high0setting adjuster.

3. Switching system according to Claim 1, characterized in that for charging said secondary energy memory (4) from said primary energy memory (1) a voltage converter (12) based on transformatory potential separation is used.

4. Switching system according to Claim 1, characterized in that as secondary memory serves a memory capacitor (4) of great voltage swing.

5. Switching system according to claim 1 or 4, characterized in that said secondary memory is designed as double-layer or multi-layer capacitor (4) of high capacity.

6. Switching system according to Claim 1, characterized in that a current-limiting unit (13) is provided in which by said consumers (2) of said first group is detected as parameter the total current load capacity of said primary energy memory (1) and the current load of said primary energy memory (1) and depending thereon a defined current flow fro charging said secondary energy memory (4) is determined and released.

7. Switching system according to Claim 1, characterized in that said switching system, for detecting the voltage of said primary energy memory (1) has a monitoring device (14) which interacts with a current-limiting unit (16) for limiting the current made available by said secondary energy memory (4) to said consumers (5) of said second group.

8. Switching system according to Claim 1, characterized in that said consumers of said first group are reduced-power consumers (2) and said consumers of said second group are high-powered consumers (5) relative to the power consumption of said reduced-power consumers (2).

9. Switching system according to Claim 1 or 8, characterized in that for power control of said consumers (5) of said second group, an electronic control unit (17) is provided in which from a variable input voltage a constant output voltage of low level is produced.

10. Switching system according to Claim 2, characterized in that said voltage converter (3) designed as high-setting adjuster uses as throttle a cable inductivity (7).

11. Switching system according to Claim 2, 3 or 10, characterized in that said voltage converter (3, 12) is not deactivated even after the maximum loading voltage has been reached.

12. Switching system according to Claim 1, characterized in that it can be used in a 12-V or 42-V power supply of a motor vehicle.